UltraATA 100 PCI Quick Installation Guide

Introducing the *UltraATA 100 PCI*

The *UltraATA 100 PCI* is an ultra high-speed dual channel UltraATA 100 controller board for use in Pentium-class computer. With full support specified in ATA/ATAPI-5, it achieves burst data transfer rates up to 100MB/sec and supports drive capacities up to 128GB. And it also provides full backward support for UltraATA 33/66, EIDE/Fast ATA-2, IDE and ATAPI devices. PCI Plug-n-Play makes the installation quick and easy, the enhanced BIOS auto-detects device types and fine tunes to the best performance for each connected IDE/ATAPI device.

Features and Benefits

- PCI Plug-n-play 2.1 compliant
- 2 independent IDE/ATA Channels, supports up to four IDE/ATA devices and 128 Bytes buffer
- Supports ultra and multiword DMA timing modes
- CRC (Cyclical Redundancy Check)
- Built in 80-Pin cable detect circuitry
- Supports External BIOS
- 32-bit 33 MHz PCI Interface
- Supports bus master DMA at 133 MB/sec PCI burst rate
- Supports maximum IDE/ATA data transfer rate of 100 MB/sec
- Compatible with Microsoft IDE/ATA drivers (Windows 95/98, Windows NT 4.0 and Windows 2000)
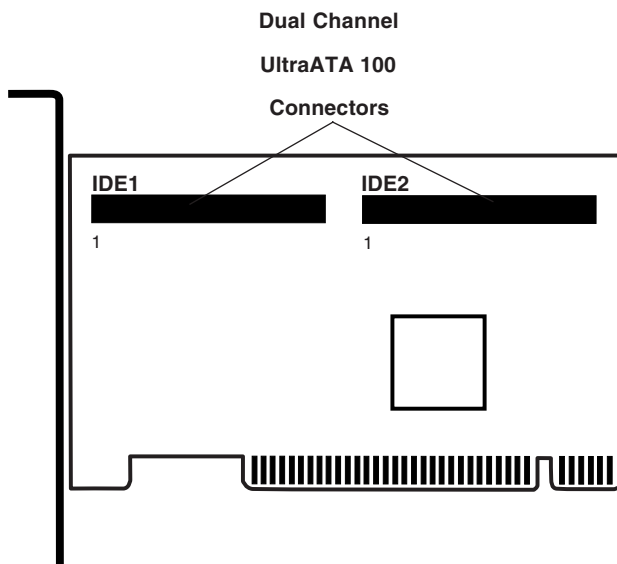- 3.3V Operating Voltage with 5V tolerant I/O

System Requirements

- Pentium-class computer with one available PCI slot
- Windows 95 OSR 2.0 w/ USBSupp or later

Package Contents

- *UltraATA 100 PCI* board
- Driver software diskette
- One 5-year warranty card
- This quick installation guide

Board Layout

Dual Channel

UltraATA 100

Connectors

IDE1

IDE2

1

1

Figure 1-1. UltraATA 100 PCI board

Hardware Installation

No specific setup is needed for your new PCI card. Simply install the card following the standard procedures for any PCI card. General instructions for installing the card are provided below, since the design of computer cases and motherboards vary. Refer to your computer's reference manual for further information, if needed.

Caution: Static Electricity Discharge may permanently damage your system. To avoid possible static electricity discharge during the installation, please follow the guidelines below:

- Discharge any static electricity build up in your body by touching a large grounded metal surface or the computer's case (if plugged in), for a few seconds.
- During the installation, avoid any contact with internal parts. Handle cards only by their external edges.

1. Turn OFF the power to your computer and any other connected peripheral devices.
2. Unplug the power cord from the back of the computer.
3. Remove your computer's cover.
4. Remove the slot bracket from an available 32-bit PCI slot.
5. To install the card, carefully align the card's bus connector with the selected PCI slot bus connector on the motherboard. Push the board down firmly, but gently, until it is well seated.
6. Replace the slot bracket's holding screw to secure the card.
7. Replace the computer cover and reconnect the power cord.

Device Connection

Note Only the 40-pin/80-wire Ultra ATA 100 cable can achieve hard disk UDMA 100 performance. Also, we suggest not to connect an UltraATA 100 (hard disk) with a slower IDE/EIDE devices (such as CD-ROM or tape backup drive) on the same channel.
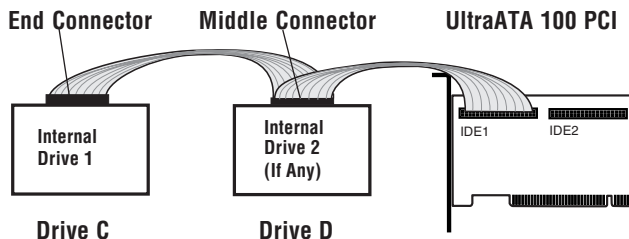
1. If you plan to install two hard disk drives on the **IDE1** channel, make sure you configure the drives as a *Master* and *Slave* according to the manufacturer's instructions. The same rule must be followed for connecting hard disk drives to the **IDE2** channel.

2. Attach one end of the included UltraATA 100 cable to the **IDE1** connector on the board. Make sure pin 1 on the cable (indicated by the colored stripe) matches pin 1 on the IDE1 connector.

Colored Edge-stripe
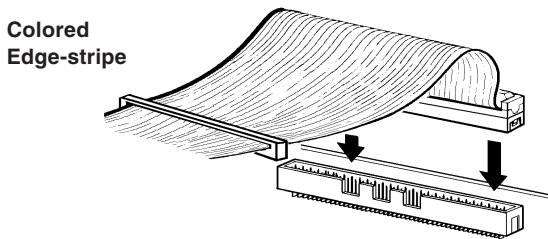
Figure 2-3: Connecting the Cable to the On-Board Connector

3. Install the hard disk drive to your computer. Attach the end connector of the UltraATA 100 cable to the connector on the hard disk drive. Make certain that pin 1 on the cable (indicated by the colored stripe) matches pin 1 on the hard disk drive's connector.

   Note The ribbon cable has two connectors. If you have one hard disk drive, connect it to the end connector of cable (*Drive C*). If you have a second hard disk drive, connect it to the middle connector of cable (*Drive D*).

End Connector   **Middle Connector**   **UltraATA 100 PCI**

Internal Drive 1

Internal Drive 2 (If Any)

IDE1   IDE2

Drive C   **Drive D**

Figure 2-4: Connecting Internal Drives

Same procedure applies when making connection to IDE2.

Software Installation

This section provides information on how to install the *UltraATA 100 PCI* drivers for the following operating systems:

New & Existing Windows 95
New & Existing Windows 98
New & Existing Windows NT 4.0
New & Existing Windows 2000

Windows 95 Driver Installation

For New Windows 95 systems

1. Follow Microsoft procedures to install Windows 95 accordingly.

2. Once Windows 95 is installed, re-boot the system into **Safe Mode** by hitting the **F8** key repeatedly during Windows Logo boot-up screen.

3. Select **My Computer/Control Panel/System/ Device Manager**.

4. Remove **PCI RAID controller** listed under **Other Devices**.

5. Restart your system manually and during boot up, Windows will detect new hardware and prompt for driver diskette.

6. Insert the Software Installation diskette into the floppy drive. Click **Next**, select **Other Locations**, type in **A:\Win9x**, click **OK,** then **Finish.** From the **Insert Disk** window, select **OK**, then retype the path **A:\Win9x** and click **OK**.

7. Remove the Software Installation diskette and select **Yes** to restart Windows to complete driver installation.

   Note Make sure to load the USBSupp in order for the controller to install properly.

For Existing Windows 95 Systems

1. After installing the board, boot up Windows 95, Windows will notify you of **New Hardware Found**.

2. **Update Device Driver Wizard** dialog box will appear, click **Next** to continue.

3. Insert the Software Installation diskette into the floppy drive, click **Other Locations** and type in **a:\Win9x**, click **OK**, and then **Finish**. From the **Insert Disk** window, click **OK**. When the **Copying Files** dialog box appears, type in **a:\Win9x** and then click **OK**.

4. Remove the Software Installation diskette and restart Windows to complete driver installation.

Windows 98/98SE Driver Installation

For New Windows 98 Systems

1. Follow Microsoft procedures to install Windows 98 accordingly.

2. Once Windows has been installed, select **My Computer/Control Panel/System/Device Manager**.

3. Double click **PCI RAID controller** listed under **Other Devices**.

4. Select **Driver** tab and click **Update Driver** button.

5. Insert the Software Installation diskette into the floppy drive and click **Next**.

6. Select **Search for the best driver for your device** option and click **Next**.

7. Check **Specify a location** and type in **a:\Win9x** and click **Next**. Click **Next** again and then **Finish**.

8. Remove the Software Installation diskette and restart Windows to complete driver installation.

For Existing Windows 98 Systems

1. After installing the board, boot up Windows 98, the **Add New Hardware Wizard** dialog box will appear. Click **Next** to continue.

2. Select **Search for the best driver for your device** option and then click **Next**.

3. Insert the Software Installation diskette into the floppy drive. Check **Specify a location** and type in **a:\Win9x** and click **Next**.

4. Click **Next** and then **Finish** respectively.

5. Remove the Software Installation diskette and restart Windows to complete driver installation.

Verify Proper Installation for Win95/98/98SE

1. Go to **My Computer/Control Panel/ System/Device Manager**.

2. Select **Hard Disk Controllers, CMD PCI-0649 Ultra DMA IDE Controller** is listed.

3. Highlight **CMD PCI-0649 Ultra DMA IDE Controller** and click **Properties**. A message *This device is working properly* is displayed in the dialog box, the driver has been correctly installed. If any error message is displayed, remove **CMD PCI-0649 Ultra DMA IDE Controller** and restart your system.

Windows NT4.0 Driver Installation

For New Windows NT System

1. When the system is booting from Microsoft NT4.0 CD, user will see the following screens.

2. Screen 1, **Setup is inspecting your computer's hardware configuration**, press **F6** key in order to specify and add the UltraATA 100 NT4.0 driver.

3. Screen 2, **Windows NT Setup, Setup is loading files**, keep pressing **F6** key to add the UltraATA 100 NT4.0 driver.

4. If screen 3 does not appear for options to **Specify Additional Device** then shut off system and repeat steps 1-3 otherwise continue to step 5.

5. Insert the Software Installation diskette and press **S.**

6. Screen 4, **Windows NT Workstation Setup,** highlight **Other** and hit **Enter**.

7. Screen 5, **Windows NT Setup,** make sure Software Installation diskette is in floppy drive and press **Enter.**

8. Screen 6, **Windows NT Setup,** highlight **CMD CSA-64xx IDE Driver** and hit **Enter** to load the UltraATA 100 driver.

9. Screen 7, **Windows NT Setup,** your UltraATA 100 driver, **CMD CSA-64xx IDE Driver** should be listed. Hit **Enter**. Setup will load drivers.

10. Follow onscreen instructions to complete setup for your NT version.

For Existing Windows NT System

1. After installing the board, boot up Windows NT. Select **My Computer / Control Panel/SCSI Adapters**, then click on the "**Drivers**" tab.

2. Select **Add...** then **Have Disk...**.

3. Insert the Software Installation diskette into the floppy drive and type in **A:\Winnt** then click **OK**.

4. Highlight **CMD PCI 646U2/648/649 Ultra DMA IDE Controller** and click **OK**.

5. Remove the Software Installation diskette and select **Yes** to restart Windows.

Verify Proper Installation for WinNT 4.0

1. Go to **My Computer/Control Panel/SCSI Adapters.**

2. Highlight **CMD PCI 646U2/648/649 Ultra DMA IDE Controller** from **SCSI Adapters** listing and select **Properties**. A message *This device is working properly* is displayed in the dialog box, the driver has been correctly installed.

Windows 2000 Driver Installation

For New Windows 2000 Systems

1. After installing the board, boot up your system.

2. Hit **F1** key when the **UltraATA 100 BIOS** shows up prompting **Press F1 or F11 for Windows 2000**...

   NOTE Windows 2000 Operating System installation will require multiple re-booting of your system. Please make sure you hit the **F1** key **EVERYTIME** Windows 2000 restarts during the installation procedure. You will not be required to do so once Windows 2000 has been loaded completely.

3. Once Windows 2000 installation completes, go to **My Computer/Control Panel/System**, click **Hardware** tab then click **Device Manage**r button.

4. Double click **IDE ATA/ATAPI Controllers** then double click **Standard Dual Channel PCI IDE Controller** icon to display the driver properties dialog box.

5. Click **Driver** tab and the click **Update Driver** button to start the **Upgrade Device Driver Wizard**, click **Next** to continue.

6. Select **Search for a suitable driver for my device (recommended)** and click **Next**.

7. Insert the Software Installation diskette into the floppy drive, check **Specify a location**, click **Next,** type in **A:\Win2K** and click **OK** then **Next** to continue.

8. If the **Digital Signature Not Found** message appears, click **Yes**.

   Note If prompted for Wndows 2000 CD-ROM, insert the CD into your CD-ROM drive and click **OK**. Type in **D:\I386** (assuming **D:** is your CD-ROM drive) and click **OK** and then **Finish**.

9. Click **Finish** and restart Windows to complete driver installation.

For Existing Windows 2000 Systems

1. After installing the board, boot up Windows 2000. Windows will attempt to detect the controller.

2. When **Found New Hardware Wizard** appears, click **Next** to continue.

3. Select **Search for a suitable driver for my device (recommended)** and click **Next**.

4. Insert the Software Installation diskette into the floppy drive, check **Specify a location**, click **Next**, type in **A:\Win2K**. Click **OK** and then **Next** to continue.

5. If the **Digital Signature Not Found** message appears, click **Yes**.

Note If prompted for Windows 2000 CD-ROM, insert the CD into your CD-ROM drive and click **OK**. Type in **D:\I386** (assuming **D:** is your CD-ROM drive) and click **OK** and then **Finish**.

6. Click **Finish** and restart Windows to complete driver installation.

Verify Proper Installation for Win2000

1. Go to **My Computer/Control Panel/System**.
2. Click on **Hardware** then click **Device Manager**.
3. Double click **IDE ATA/ATAPI Controllers**, then double click **CMD PCI-0649 Ultra DMA IDE Controller** to display driver properties.

   A message *This device is working properly* is displayed in the dialog box, the driver has been correctly installed.

Bios Configuration

The *UltraATA 100 PCI* **BIOS** will appear everytime your system starts up. If the bios doesn't show, please try your controller in another PCI slot. During this **(Post)** process, the bios will show up and indicate the devices attached to it. The bios also shows up with a message **Press F1 or F11 for Windows 2000...** This message **only** applies to **New Windows 2000 installation** and you only need to press it during installation. You do not need to press this key in any other situation. Please see **New Windows 2000 installation** for more details.

Technical Support

QUESTIONS? SIIG's **Online Support** has the answers! Simply visit our web site at ***www.siig.com*** and click on **SUPPORT**. Our online support database is updated daily with new drivers and solutions. The answers to your problems could be just a few clicks away.

Return Merchandise Authorization (RMA)

SIIG warrants to the original buyer of the product that the hardware is free of defects in materials and workmanship for a period of one, two or five years from the date of purchase. If your product fails to be in good working order during the warranty period, you may return it to SIIG for repair or replacement at SIIG's option.

To return the product, you need to follow these steps.

Step 1: Contact SIIG's RMA Department

To obtain an RMA number, SIIG's RMA Department can be reached by phone at **(510)413-5333** or fax at **(510)657-5962** or email at **service@siig.com.** In order to issue an RMA number, the product serial number is required. This number can be found on the side of the box and on the back of the product.

Step 2: Complete the RMA form

• Fill out your Return Merchandise Authorization (RMA) form, and include it in the package with the product.

• Properly pack the product for shipping. All software, cable(s) and other accessories that came with the original package **must be included**.

• Clearly write your RMA number on the top of the returned package and on the accompanying RMA form.

   SIIG will refuse to accept any shipping package, and will not be responsible for a product returned without an RMA number posted on the outside of the shipping carton.

Step 3: Ship the Product

You are responsible for the cost of shipping back to SIIG at the following address:

> SIIG, Inc.   RMA#_____
> 6078 Stewart Ave.
> Fremont, CA 94538

SIIG will ship the repaired or replaced product via UPS Ground or US Mail at no cost to you.

PRODUCT NAME	MODEL NUMBER
UltraATA 100 PCI	CN2474

FCC RULES: TESTED TO COMPLY WITH FCC PART 15, CLASS B
OPERATING ENVIRONMENT: FOR HOME OR OFFICE USE

FCC COMPLIANCE STATEMENT:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC NOTICE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or TV technician for help

Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment

THE PARTY RESPONSIBLE FOR
PRODUCT COMPLIANCE
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